

## WHAT IS CLAIMED IS:

1. A method of making a catalyst for carbon nanotubes and nanofibers, comprising:

heating oxygen compound of transition metal in  
5 oxidative ambient at a temperature of 800°C through 1,500°  
C to be transformed into an agglomerated transition metal  
oxide; and

powdering the agglomerated transition metal oxide  
into a minute particle.

10 2. The method according to claim 1, wherein the  
transition metal includes one or more selected from a  
group consisting of nickel (Ni), cobalt (Co), iron (Fe),  
molybdenum (Mo), and chrome (Cr).

15 3. The method according to claim 1, wherein the  
oxidation compound of the transition metal includes one  
or more selected from a group consisting of transition  
metal oxide, hydroxide, carbide, sulfide and nitride.

20 4. The method according to claim 1, wherein the  
agglomerated transition metal oxide is powdered to have  
an average particle size of 500µm or below.

5. The method according to claim 1, wherein the  
oxygen compound of the transition metal includes oxygen  
compound of copper.

25 6. The method according to claim 5, wherein the  
oxygen compound of copper ranges from 10% to 50% weight

with regard to 100% weight of the transition metal oxide.

7. The method according to claim 6, wherein the oxygen compound of the transition metal is heated at a temperature of 800°C through 1,000°C.

5 8. The method according to claim 1, wherein the oxygen compound of the transition metal is heated together with a support material selected from a group consisting of silica, alumina and magnesia.

9. The method according to claim 8, wherein the 10 oxygen compound of the transition metal is heated at a temperature of 1,000°C through 1,400°C.

10. A catalyst for carbon nanotubes and nanofibers, which has an average particle size of 500µm or below and in which transition metal oxide and copper oxide are 15 sintered.

11. A catalyst for carbon nanotubes and nanofibers, which has an average particle size of 500µm or below and in which transition metal oxide and a support material selected from a group consisting of silica, alumina and 20 magnesia are sintered.

12. The catalyst according to claim 10 or 11, wherein the transition metal includes one or more selected from a group consisting of nickel (Ni), cobalt (Co), iron (Fe), molybdenum (Mo), and chrome (Cr).